

In an additional embodiment, a first right ventricular electrode is used to sense cardiac signals and provide pacing pulses with different combinations of the first and second left ventricular electrodes, the first supraventricular electrode and the housing.

IN THE CLAIMS

Please cancel claims 1 - 40 without prejudice or disclaimer.

Please replace claims 41-54 with their corresponding claims in the appendix entitled "Clean Version of the Amended Claims." The replacement claims are intended to reflect the specific amendments as detailed in the following marked up set of claims.

41. (Amended) A method, comprising:

programming at least one first pacing [pulses] pulse vector between (1) at least one of a first left ventricular electrode and a second left ventricular electrode in a left ventricular region, and (2) a first supraventricular electrode in a right atrial region; and

delivering a pacing pulse according to the at least one first programmed pacing pulse vector [between at least one of the first left ventricular electrode and the second left ventricular electrode, and the first supraventricular electrode].

42. (Amended) The method of claim 41, including:

programming at least one sensing [vectors] vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode and (2) the first supraventricular electrode[,]; and

sensing a cardiac signal [between at least one of the first left ventricular electrode and the second left ventricular electrode, and the first supraventricular electrode] according to the at least one programmed sensing vector.

43. (Amended) The method of claim 41, including programming at least one second pacing [pulses] pulse vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode and (2) a conductive housing of an implantable pulse generator, and

where delivering the pacing pulse includes delivering the pacing pulse [between at least one of the left ventricular electrode and the right ventricular electrode, and the housing] according to the at least one second programmed pacing pulse vector.

44. (Amended) The method of claim 41, [wherein programming pacing pulses vector includes] including programming [a] at least one second pacing pulse vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode and (2) a first right ventricular electrode in a right ventricular region; and

delivering a pacing pulse according to the at least one second programmed pacing pulse vector [between at least one of the first left ventricular electrode and the second left ventricular electrode, and the first right ventricular electrode].

45. (Amended) The method of claim 44, wherein delivering the pacing pulse includes delivering the pacing pulse from the commonly connected first and second left ventricular electrodes [in common] to the first right ventricular electrode.

46. (Amended) The method of claim 44, wherein delivering the pacing pulse includes delivering the pacing pulse between (1) the commonly connected first left ventricular electrode and the second left ventricular electrode and (2) the commonly connected first right ventricular electrode and a housing of an implantable pulse generator[, where the first and second left ventricular electrodes are common and the first right ventricular electrode and the housing are common].

47. (Amended) The method of claim 41, [where] wherein the programming the at least one first pacing [pulses] pulse vector includes programming the at least one first pacing pulse vector between (1) at least one of the first left ventricular electrode, the second left ventricular electrode and a third left ventricular electrode in the left ventricular region, and (2) the first supraventricular electrode in a right atrial region; and

delivering the pacing pulse according to the at least one first programmed pacing pulse

vector [between at least one of the first left ventricular electrode, the second left ventricular electrode, the third left ventricular electrode and the first supraventricular electrode].

48. (Amended) A method, comprising:

programming at least one first pacing [pulses] pulse vector between (1) at least one of a first left ventricular electrode and a second left ventricular electrode in a left ventricular region, and (2) a right ventricular electrode in a right ventricular region; and

delivering a pacing pulse according to the programmed at least one first pacing pulse vector [between at least one of the first left ventricular electrode and the second left ventricular electrode, and the right ventricular electrode].

49. (Amended) The method of claim 48, including:

programming at least one sensing [vectors] vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode, and (2) the right ventricular electrode[,]; and

sensing a cardiac signal [between at least one of the first left ventricular electrode and the second left ventricular electrode, and the right ventricular electrode] according to the programmed at least one sensing vector.

50. (Amended) The method of claim 48, including programming at least one second pacing [pulses] pulse vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode, and (2) a conductive housing of an implantable pulse generator, and [where] wherein delivering the pacing pulse includes delivering the pacing pulse [between at least one of the left ventricular electrode and the right ventricular electrode, and the housing] according to the at least one second programmed pacing pulse vector.

51. (Amended) The method of claim 48, [wherein programming pacing pulses vector includes] including programming [a] at least one second pacing pulse vector between (1) at least one of the first left ventricular electrode and the second left ventricular electrode, and (2) a

supraventricular electrode in a right atrial region; and

delivering a pacing pulse according to the [programmed pacing pulse vector between at least one of the first left ventricular electrode and the second left ventricular electrode, and the supraventricular electrode] at least one second pacing pulse vector.

52. (Amended) The method of claim 51, wherein delivering the pacing pulse includes delivering the pacing pulse between (1) the commonly connected first and second left ventricular electrodes [in common to] and (2) the supraventricular electrode.

53. (Amended) The method of claim 51, wherein delivering the pacing pulse includes delivering the pacing pulse between (1) the commonly connected first left ventricular electrode and the second left ventricular electrode and (2) the commonly connected supraventricular electrode and a housing of an implantable pulse generator [, where the first and second left ventricular electrodes are common and the supraventricular electrode and the housing are common].

54. (Amended) The method of claim 48, [where] wherein the programming the at least one first pacing [pulses] pulse vector includes programming the at least one first pacing pulse vector between (1) at least one of the first left ventricular electrode, the second left ventricular electrode and a third left ventricular electrode in the left ventricular region, and (2) the first [supraventricular] right ventricular electrode [in a right atrial region; and

delivering the pacing pulse according to the programmed pacing pulse vector between at least one of the first left ventricular electrode, the second left ventricular electrode, the third left ventricular electrode and the right ventricular electrode].

Please enter the following new claims 57-70.

57. (New) A method comprising:

disposing a first electrode in association with a left ventricular region of a heart;

disposing a second electrode in association with a right atrial region of the heart; and
delivering a first pacing pulse between the first and second electrodes.

58. (New) The method of claim 57, further comprising:
disposing a third electrode in association with the left ventricular region;
coupling the third electrode electrically in common with the first electrode; and
wherein the delivering the first pacing pulse includes delivering the pacing pulse
between: (1) the commonly connected first and third electrodes; and (2) the second electrode.
59. (New) The method of claim 58, further comprising sensing a cardiac signal between: (1)
the commonly connected first and third electrodes; and (2) the second electrode.
60. (New) The method of claim 57, further comprising sensing a cardiac signal between the
first and second electrodes.
61. (New) The method of claim 57, further comprising:
disposing a conductive housing of an implantable pulse generator in association with the
heart; and
delivering a second pacing pulse between the first electrode and the conductive housing
of the implantable pulse generator.
62. (New) The method of claim 61, further comprising:
disposing a third electrode in association with the left ventricular region;
coupling the third electrode electrically in common with the first electrode; and
wherein the delivering the second pacing pulse includes delivering the second pacing
pulse between (1) the commonly-connected first and third electrodes and (2) the conductive
housing of the implantable pulse generator.

63. (New) A method comprising:
disposing a first electrode in association with a left ventricular region of a heart;
disposing a second electrode in association with a right ventricular region of the heart;
and
delivering a first pacing pulse between the first and second electrodes.
64. (New) The method of claim 63, further comprising:
disposing a third electrode in association with the left ventricular region;
coupling the third electrode electrically in common with the first electrode; and
wherein the delivering the first pacing pulse includes delivering the pacing pulse
between: (1) the commonly connected first and third electrodes; and (2) the second electrode.
65. (New) The method of claim 64, further comprising sensing a cardiac signal between: (1)
the commonly connected first and third electrodes; and (2) the second electrode.
66. (New) The method of claim 63, further comprising sensing a cardiac signal between the
first and second electrodes.
67. (New) The method of claim 63, further comprising:
disposing a conductive housing of an implantable pulse generator in association with the
heart; and
delivering a second pacing pulse between the first electrode and the conductive housing
of the implantable pulse generator.
68. (New) The method of claim 67, further comprising:
disposing a third electrode in association with the left ventricular region;
coupling the third electrode electrically in common with the first electrode; and
wherein the delivering the second pacing pulse includes delivering the second pacing
pulse between (1) the commonly-connected first and third electrodes and (2) the conductive